MASON COUNTY
COMMUNITY SERVICES

Commercial Drawings Checklist

This checklist applies to new and existing commercial buildings and commercial additions. Additional items may also be required based on the scope of the project and after review of the documents submitted.

Plans shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed and demonstrate that plans will conform to the provisions of the adopted construction codes, ordinances of Mason County and other State and Federal Regulatory statutes as required.

Before submitting for permit review, it is important to read and understand the prerequisites required for submittal. You can review the submittal requirements and various checklists by exploring the various document and process links here:

https://www.co.mason.wa.us/community-services/building/index.php

BUILDING PLANS:

- ☐ **REQUIRED PLANS**
- ☐ **1 paper copy of documents and**
- ☐ **(1 flash drive with ALL documents)**

Construction drawings **shall include** but are not limited to the following:

- ☐ **Coversheet Design Criteria Information**
  - ☐ Index of all plan sheets
  - ☐ Type of Construction - (Use IBC Chapter 6 classifications)
  - ☐ Occupancy type(s) - (Use IBC Chapter 3 Classifications)
  - ☐ Total allowable area of building - (Use IBC Chapter 5 & Table 503) provide an allowable area calculation. If fire walls are used, provide a separate allowable area calculation for each “building” see IBC Sec.706.
  - ☐ Actual floor area – Break-down in square feet by occupancy types; use of rooms or areas (i.e., warehouse, office, and spray booth, etc.); area per story or mezzanine; area of covered entries or docks.
  - ☐ Occupancy type new and existing
  - ☐ Calculated occupant load
  - ☐ List Fire sprinklers – Non sprinklered occupancy (per IBC 903)
  - ☐ Allowable and Actual Floor Area.
    - ✓ Provide an allowable floor area calculation for the building and specify the actual square footage for each floor and/or mezzanine.
    - ✓ See Table No. 503 for basic allowable floor area based on occupancy group and type of construction.

- ✓ See Section 506 for allowable floor area increase based on location on property and installation of sprinklers.
- ✓ See Section 506.3, 506.4, and 506.5 for allowable area of multi-story buildings.
- ✓ See Section 505.2 for allowable area of mezzanines and 506.4 for basements.
- ✓ See Section 506.4 for allowable area determination. When fire walls are used to create separate buildings, a separate allowable area calculation must be provided for each such building, also ref. Section 706.

☐ **Height and Number of Stories**

- ☐ Compute the height of the building, IBC Chapter 5, and determine the number of stories. See Table 503 for the maximum height and number of stories permitted based on occupancy group and type of construction.
- ☐ Review the building for conformity with the type of construction requirements in Chapter 6 including setbacks for fire protection.
- ☐ Review the building for conformity with the exiting requirements in Chapter 10 for exiting, stairs, doors etc.
- ☐ Review the building for conformity with the accessibility regulations in IBC Chapter 11, ICC ANSI A117.1-09. (This can be accomplished with a site access page in the plan set).

☐ **Site Plan:**

Site plans shall be drawn to scale, i.e. 1”: 40’ or 1”:30’ etc. and shall include:

- ☐ Location of the building or tenant space within the site
- ☐ All building projections and distance to property lines from all structures
- ☐ Lot dimensions
- ☐ Distance between buildings
- ☐ Easements
- ☐ Yard setbacks
- ☐ Stream, wetland, waterbody, steep slope location and setback if applicable
- ☐ Street names(s)
- ☐ North arrow
- ☐ Parking layout showing arrangement:
  - ✓ Size of spaces,
  - ✓ Circulation,
  - ✓ Total number of parking spaces and accessible parking with IBC Chapter 11 and ICC/ANSI A117.1-09 Accessible route including exterior walkways and curbs.

- ✓ Number of required electric vehicle spaces and charging infrastructure. Ref IBC State Amendment Chapter 429 for certain occupancy classifications.

☐ **Exterior Elevations/Details:**

- ☐ Provide exterior elevations of front, sides, and rear of building.
- ☐ Show elevation of grade adjacent to building.
- ☐ Specify finish floor, ceiling, roof, and parapet heights.
- ☐ Show all exterior doors and openings and architectural features of the building or structure.
- ☐ Show parapets and other building appendages including loading docks, covered areas, exterior balconies, and stairways.
- ☐ Provide detail of trash enclosures.
- ☐ Provide a sectional view through each exterior stairway. Show rise, run, landings, handrails, and guards to comply with IBC Sec 1009 &1012.
- ☐ All handrails must extend not less than 12 inches beyond top riser and at least one tread beyond the bottom riser, and must return to a wall, guard or walking surfaces not less than one tread depth beyond bottom riser.
- ☐ Open risers are not permitted unless they meet one of the exceptions listed in IBC 1009.4 ICC/ANSI 117.1 200, Sections 504.3, 505.10.2 and 505.10.3.
- ☐ Guards must have intermediate rails or an ornamental pattern such that a sphere 4” in dimeter cannot pass through up to a height of 42” unless they meet the requirements for exceptions noted in IBC 1013.3.

☐ **Floor Plan:**

Floor plans shall be drawn to scale, i.e. ¼”:1’. Floor Plan(s) shall indicate the use proposed and shall include:

- ☐ Accessibility compliance per IBC Chapter 11 and ANSI 117.1-09.
- ☐ Floor plan, aisle widths, fixture plans, seating layout, location of rack storage, etc.
- ☐ Label the use and provide dimensions of rooms. (Classify use per IBC Sec. 302.)
- ☐ Provide wall legend. Delineate between all wall types including new, existing, fire-rated, bearing and non-bearing, shear, demolished, and relocated.
- ☐ Show location, size, and door swing for all exits.
- ☐ Occupant load exit plan and loads at exit doors.
- ☐ Provide dimensions, square footage, and clearly label the use of all rooms or areas.
- ☐ Provide wall legends.

- ☐ Delineate all wall types including but not limited to new, existing, bearing, non-bearing, wood, steel, shear, and demising, partial height. Delineate between insulated and non-insulated, demolished, relocated, etc. Provide accurate wall legends that match the structural plans and the energy calculations. Clearly label all rated fire resistive assemblies, including but not limited to, fire walls, fire barriers, occupancy separations, horizontal exits, rated corridors, stair, and shaft enclosures.
- ☐ Show the location and specify the opening and header sizes for all windows and doors. Show the direction of door swing for all doors. Label accessibility at doors and side clearances.
- ☐ Show glazing required to be safety glazing per IBC Chapter 24. Glazing shall be identified on plans.
- ☐ Show exit signs and emergency lighting as required by IBC.
- ☐ Show water fountains, built-in cabinets, counters, tables, chairs, and permanent fixtures.

☐ **Framing Plan:**

When tenant framing work is proposed, (work not increasing the footprint of the structure) framing plans shall be drawn to scale, i.e. ¼ ="1'; and shall include in the submitted drawings information needed to clearly show extent of proposed construction i.e.:

- ☐ Type, grade, and design strength of materials used. i.e. Doug Fir #2 or other
- ☐ Proposed span, spacing and specification of all beams, joists, rafter, and sheathing etc.
- ☐ Nailing schedules.
- ☐ Provide framing plans for all roofs, ceilings, and floors. Specify the size, span, spacing, species and grade or gauge of all vertical and horizontal wood or steel framing members.
- ☐ Connections that resist seismic forces shall be designed and detailed on the drawings.
- ☐ Provide attachment details for top and bottom plates. Specify size and spacing of fasteners.
- ☐ Provide deflection details for full height non-bearing walls.
- ☐ Specify size, species, and grade of posts under beams. Specify size and gauge of all steel columns. Show connections, beam to beam, beam to post, post to foundation using approved metal connectors or other positive connection h. Specify size, grade, and species of headers for openings.
- ☐ Specify panel identification index for plywood floor and roof sheathing. IBC Sec. 2304 Plywood roof sheathing shall be bonded with exterior glue. The nailing schedule for plywood diaphragms and shear walls should be shown on plans. Details must agree with calculations.

- ☐ For nonstructural components (including, but not limited to, mechanical systems, machinery and equipment required for life-safety systems, fire suppression systems, and tanks) provide calculations and details to show that components and their attachments, including anchorage and required bracing, have been designed to resist lateral forces per IBC Chapter 16.
- ☐ Nailing for gypsum wallboard (lath) (sheathing board) (stucco) used structurally on shear walls should be in accordance with IBC Chapter 23.

☐ **Ceiling Plan:**

- ☐ Provide reflected ceiling plan. Show locations of light fixtures and switching.
- ☐ Show the sizes, species, grades, spacing, and spans of ceiling joists.
- ☐ Clearly detail required draft-stopping in combustible construction. IBC Chapter 7.
- ☐ Provide cross section of and lateral bracing detail for suspended ceilings. ASCE-7.
- ☐ Provide reflected ceiling plan with location of light fixtures. Insulation cannot be placed on suspended ceilings containing recessed light fixtures unless lights are IC rated (provide listing).
- ☐ Ceiling framing plans must specify size, grade, species, or gauge, and spacing of ceiling joists. Clearly detail required fire-blocking and draft stopping in combustible construction. IBC Chapter 7. Provide construction details for draft stops and draft curtains. Draft stopping materials shall be specified as one of the materials listed in IBC 717; fire-blocking materials shall be specified as one of the materials listed in IBC 717.
- ☐ Provide cross section of and lateral bracing detail for suspended ceilings.
- ☐ Metal suspension systems for acoustical tile and for lay-in panels must satisfy all requirements of ASTM C635, ASTM C636, ASCE 7.

☐ **Sections and Details:**

Section views and details, drawn to scale, shall be included in the submitted drawings as needed to clearly and show extent of proposed construction. Details shall include connection details.

- ☐ Provide typical wall section(s) showing typical framing conditions for this project.
- ☐ Show components of walls including framing, finish materials, vapor barriers, and insulation.

- ☐ Specify sizes, species, grades, spacing, and spans of all framing members, (walls, floors, and ceilings).
- ☐ Provide attachment details for top and bottom plates.
- ☐ Provide detail of top-wall lateral bracing @ a minimum of 8' o/c. for walls over 8' in unsupported length.
- ☐ Show ceiling construction (size and spacing of joists) and R-value of insulation.
- ☐ Show all doors and windows. Provide window and door schedule for new and existing.
- ☐ Provide a section through each stairway. Show rise, run, landings, handrails, and guards complying with IBC Sec. 1009.

☐ **Fire Resistive Elements:**

Show that building elements comply with fire-resistive requirements of IBC Chapter 7.

- ☐ Provide an architectural cross-section through the fire resistive construction and specify the Item Number from IBC Tables in section 721. or reprint the language and details from the Gypsum Association File No. from the Fire Resistance Design Manual or the UL Directories for all fire resistive assemblies on the plan set.
- ☐ Provide sections and details of fire-resistive floor-ceiling and wall assemblies clearly detailing all fire-resistive construction. Provide sections and details showing that all required horizontal fire-rated assemblies are supported by structural systems having equivalent fire-resistive protection.
- ☐ Provide details for parapets on fire-resistive exterior walls and fire walls. IBC 705.11.
- ☐ Specify ratings for doors and other openings in rated walls.

☐ **Accessibility:**

Provide floor plans and elevations of sufficient detail to show that the building and site facilities are accessible to persons with disabilities per the IBC Chapter 11, ANSI117.1-09 and Washington State amendments.

- ☐ Plans must show an accessible route of travel.
- ☐ Provide floor plans and elevations with dimensions for restrooms, kitchens, counters, and similar fixed facilities showing compliance with barrier-free access requirements.
- ☐ Provide hardware schedule specifying door locksets and latch-sets having lever, push operated, or other devices openable by wrist or arm pressure.

- ☐ In an existing building, to the maximum extent feasible, the path of travel to altered areas shall be made accessible. The path of travel means a continuous, unobstructed way of pedestrian passage by means of which an altered area may be approached, entered, and exited, and which connects the altered area with an exterior approach (including sidewalks, streets, and parking areas), an entry to the facility, and other parts of the facility.
- ☐ Provide a detail showing that accessible parking spaces will be identified by the International Symbol of Accessibility. Such signs shall be 60 inches minimum above the floor of the parking space, measured to the bottom of the sign. IBC Chapter 11 and ICC/ANSI A117.1-2009.

☐ **WA State Energy/Light/Mechanical/Ventilation:**

Provide documentation showing compliance with Washington State Energy Code (WSEC)

- ☐ Energy/Light/Ventilation The plans shall show in sufficient detail all pertinent data and features of the building and the equipment and systems including but not limited to: design criteria, exterior envelope component materials, U-values of the envelope systems, R-values of insulating materials, size and type of apparatus and equipment, equipment and systems controls, light fixture schedules with wattage and controls narrative and other pertinent data to indicate compliance with the requirements of the Washington State Energy Code, WAC 51-11 (WSEC). Washington State Energy Code Compliance Forms must be completed and submitted with permit application. Ref this link for additional information: http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx

- ☐ Provide an architectural section for each roof, ceiling, wall, and floor. Specify the R-value and type of insulation to be installed. Detail each assembly to match the energy calculations.
- ☐ Provide a window schedule that shows the percentage of total glazing area (vertical and overhead) relative to the gross exterior wall area, Glazing U-factors and solar heat gain coefficient should be noted on the window and door schedules.
- ☐ The lighting wattage shall not exceed the lighting power allowance calculated in accordance with the Washington State Energy Code. The lighting power budget shall be the sum calculated by multiplying the gross conditioned floor area, in square feet, by the appropriate unit power budget, in watts per square foot, specified in the WSEC. Provide electrical plans and energy calculations. Show interior and exterior lights and switching on drawings (this item cannot be deferred).
- ☐ The minimum requirements for operable area to provide natural ventilation required in the IBC shall be shown or indicate that a mechanical ventilation

system(s) will be provided that is capable of supplying the minimum outdoor air quantities specified in the International Mechanical Code.

- ☐ Completed WSEC Compliance Form(s)
  - i. Lighting
  - ii. ii. Mechanical
  - iii. iii. Envelope

- ☐ The plans shall show in sufficient detail all pertinent data and features of the building and the equipment and systems including but not limited to: design criteria, exterior envelope component materials, U-values of the envelope systems, R-values of insulating materials, size and type of apparatus and equipment, equipment and systems controls, light fixture schedules with wattage and controls narrative and other pertinent data to indicate compliance with the requirements of the Washington State Energy Code, WAC 51- 11.

☐ **Structural Design:**

- ☐ Provide a copy of the soils investigation and evaluation report. Soils report shall be based on the IBC and be stamped by a Washington State licensed Soils Engineer and shall include the following:
- ☐ A site plan showing the location of all test borings and/ or excavations.
- ☐ Descriptions and classifications of the materials encountered.
- ☐ Elevation of the water table.
- ☐ Recommendations for foundation type and design criteria, including bearing capacity, provisions to mitigate the effects of expansive soils; provisions to mitigate the effects of liquefaction, and soil strength and the effects of adjacent loads per IBC Sec 1803.
- ☐ The geotechnical engineer should specify the amount of total and differential settlement expected for the building. Settlements greater than 1" total and ½" differential need to be addressed by the structural engineer.
- ☐ Structural calculations shall be of sufficient detail and clarity to show that the structure has been designed to conform to the structural engineering regulations and requirements of the IBC and other required standards. See IBC Chapters 16 through 23. Design for Seismic Design Category D2, Ground Snow Load 25 to 55 depending on area of the County, and Wind Speed 85 mph with a Gust factor of 110.
- ☐ Provide a breakdown of the loads used in design for each portion of the structure including, but not limited to glulams, purlins, sub-purlins, columns, wall panels,

wall anchorage to trusses or purlins; concrete jamb designs; door lintels; spandrels; retaining walls, stair entrances. Load combinations shall be as prescribed in the IBC. General notes shall specify the design values of the materials used.

- Details shall be provided to show how roof and floor diaphragm loads will be transferred to vertical shear resisting elements and to show how loads in vertical shear-resisting elements will be transferred from level to level. Connections should be justified with structural calculations for compliance with the allowable values. The effects of overturning on vertical diaphragms shall be investigated in accordance with the IBC.

Foundation Plan:

- Scale and north arrow.
- Foundation plans and structural engineering shall incorporate the recommendations of the soils report.
- The plans should show the type and extent of the structural fill below the footings and slabs according to the geotechnical report. Specify reinforcement type, size, and spacing in slabs.
- Show location and size of exterior and interior bearing footings and foundations. Specify pier sizes and provide foundation sections. Provide a footing schedule that specifies footing size and depth and that specifies size and spacing of horizontal and vertical reinforcement.
- Identify shear and retaining walls; provide sections of these elements.

Design Details and Detail References:

- May be provided by the engineer or the designer and must be incorporated into the plans.
- Must agree with engineering and framing plan.
- Blocking, bridging, nailing, straps approved framing anchors or mechanical fasteners shall be shown in understandable detail and coordination with the structural documents and design criteria. Provide details and references for connections at each element:
  i. Roof to exterior and interior walls top plate or beam, including gable end.
  ii. Exterior wall to wall, beam, blocking or foundation.
  iii. Interior wall to wall, beam, blocking or foundation.
  iv. Pony walls to wall above and foundation below.
  v. Beam to column to foundation.

- ☐ Openings in diaphragms shall have perimeter members detailed to distribute shear stresses.

☐ **Structural Cross Sections:**

- ☐ Special reinforcement for columns shall be detailed as required in IBC Sec. 1907.8.
- ☐ Show details of concrete walls anchored to all floors, roofs, and other structural elements, which provide required lateral support for the wall.
- ☐ Provide typical wall, floor/ceiling, and roof/ceiling assembly details as necessary to show typical framing conditions for this project. Specify all components including finish materials, fasteners, vapor barriers, and insulation.
- ☐ Interior walls that exceed 6 feet in height shall be able to resist a horizontal load not less than 5 psf. Detail lateral bracing on drawings. Sec. 1607.13.
- ☐ The deflection of interior walls shall not exceed that specified in IBC Chapter 16 and ASCE 7.
- ☐ Provide cross section of floors and ceilings and detail lateral bracing.
- ☐ Provide full height details for all mezzanines and stairways. Details must specify framing members, spacing and finishes. Provide details of the guards per IBC Chapter 10. Guards shall be designed to sustain the special loads specified in IBC Chapter 16.

☐ **Schedules and Plans:**

All schedules shall be clear, readable, and shall be referenced on each plan sheet showing locations.

- ☐ The foundation plan shall show all hold-down types and locations.
- ☐ The foundation plan shall show either each different anchor bolt spacing or schedule references.
- ☐ Floor plans shall show each shear wall type and location.
- ☐ Floor framing plans shall show straps, drag struts, blocking and detail references.
- ☐ Roof framing plans where trusses are used for interior shear wall connections, design loads shall be noted on the plans and the truss engineer shall design for such loads.

☐ **Roof:**

- ☐ Roof framing plans must show the size and spacing of glu-lams, purlins, rafters, and ceiling joists; and/or provide engineer signed truss plans and calculations. Prefabricated truss calculations and drawings should be submitted at the time of initial submittal in order to coordinate review of all documents.

However, Submittal of truss drawings may be a deferred if a truss layout showing loads and load paths is provided and the truss design is specifically listed on the plans as a deferred submittal item per IBC Sec.107.
(If deferred, provide a deferred submittals request form)
NOTE: For deferred submittals, prior to truss installation the Engineer of record shall review and approve the truss package and provide a letter of approval for coordination with design documents.

- ☐ Provide roof diaphragm nailing plan and schedule. Detail joist bridging where required.
- ☐ Roof members shall be designed to include mechanical and sprinkler weights.
- ☐ Unless roof is specifically designed for water accumulation, roof systems shall be sloped per IBC.
- ☐ Clearly detail required roof ventilation.
- ☐ Provide details of roofing materials including insulation.
- ☐ Show location and provide construction details for required roof access hatch if used and provide any details for fall protection related to guards at roof as required by IBC.
- ☐ Welding data or details for steel decking used as a diaphragm should be provided. Information should comply with a specific evaluation report or test data should be submitted in compliance with IBC.

☐ **Plumbing:**

When plumbing work is proposed, submitted plans shall include plumbing fixture counts and schedules, supply, and waste/vent piping schematics in order to provide required review.

- ☐ Provide information required as part of the permit application.

☐ **Mechanical:**

When mechanical work is proposed, submitted plans shall include mechanical equipment schedules, ducting plans, and gas piping schematics needed in order to provide required review.

☐ **Fire Permit**

All fire suppression shall comply with the Mason County adopted Codes and Fire regulations. Fire Sprinkler Systems shall be installed or modified under separate permit. Reference the Mason County Fire Worksheet:
https://www.co.mason.wa.us/forms/Community_Dev/commercial-fire-flow-worksheet.pdf

- ☐ Tenant spaces where sprinkler heads require re-location due to the installation of partitions (or for other reasons) shall obtain separate permits for the relocation of heads; or provide a letter from a Washington State Licensed Fire Sprinkler contractor stating that no modifications are required.
- ☐ Suppression System serving Class One Hood and Ducts used for grease cooking shall obtain a separate permit for the installation of the hood Suppression system.

☐ **Fire Alarm System**

- ☐ Fire Alarm System shall be installed or modified under separate permit.
- ☐ Tenant spaces where devices or detectors require re-location due to the installation of partitions (or for other reasons) shall obtain separate permits for the alarm system modification; or provide a letter from a Washington State Licensed Fire Alarm contractor stating that no modifications are required.
- ☐ Where auto shutoff of the HVAC system is required, the shutdown of the system shall tie to the alarm system.

☐ **Special Inspection**

In accordance with the Special Inspection Requirements of the International Building Code, Chapter 17. It may be necessary for third party special inspectors to be employed to inspect soils, concrete strength, steel reinforcing placement, structural welding and bolting, spray-on fireproofing, truss bracing, structural masonry construction, smoke control systems, pilings, caissons and/or other inspections as required deemed necessary by the Architect and/or Engineer of record.

Specific requirements are outlined in Chapter 17 of the IBC and the form for Special Inspection at this link: https://www.co.mason.wa.us/forms/Community_Dev/special-inspection-agreement.pdf

This plan review checklist may not be all-inclusive given the variation of project types and complexity of your project. You are encouraged to ask questions as you develop your project and to discuss any clarifications needed with a plans examiner. You can contact the county at (360) 427-9670 and ask for one of our reviewers during regular business hours.

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